REMARKS

Claims 14, 15, 28, and 29 are pending and under consideration. Claims 14 and 15 have been amended. Claim 29 has been added. Support for the amendments to claims 14 and 15, as well as for new claim 29, may be found in the claims as originally filed. Further reconsideration is requested based on the foregoing amendment and the following remarks.

Response to Arguments:

The Applicants appreciate the consideration given to their arguments. The Applicants, however, are disappointed that their arguments were not found to be persuasive. Further reconsideration is thus requested.

Objections to the Claims:

Claims 14 and 15 were objected to for various informalities. Claims 14 and 15 were amended in substantial accord with the Examiner's suggestions. The Examiner's suggestions are appreciated. Withdrawal of the objection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 102:

Claims 14, 15, and 28 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,269,445 to Rubin (hereinafter "Rubin"). The rejection is traversed to the extent it would apply to the claims as amended.

The fifth clause of claim 14 recites:

Modifying a function of said placement and wiring processing program stored in said program storage unit during the execution of said placement and wiring processing.

Rubin neither teaches, discloses, nor suggests, "modifying a function of said placement and wiring processing program stored in said program storage unit during the execution of said placement and wiring processing," as recited in claim 14. In Rubin, rather, "programming means 610, which is a software, is stored in the main memory 606," as described at column 6, lines 11 and 12. Even if the PLA generator 60 is being used, Rubin never goes back to mass storage 604 to modify any function of the PLA generator 60, let alone during execution, contrary to the assertion in the sixth bullet of section 5 at page 3 of the final Office Action.

The PLA generator 60, rather, is a program that has already been written to generate programmable logic arrays. In particular, as described at column 8, lines 24, 25, and 26:

The PLA generator 60 includes a program written by Sundaravarathan R. Iyengar, which is used to generate programmable logic arrays.

Since, in Rubin, the PLA generator 60 is a program that has already been written, it would make little sense to modify "a function of said placement and wiring processing program stored in said program storage unit during the execution of said placement and wiring processing," as recited in claim 14.

In Rubin, rather, the user specifies the Boolean function that he wishes to implement in the form of a programmable logic array (PLA), i.e. the *output* of the PLA generator 60. In particular, as described at column 8, lines 27-32:

> The PLA generator allows the user to specify the Boolean function that he wishes to implement in the form of a programmable logic array (PLA), and the PLA generator automatically provides the commands to lay out a programmable logic array implementing the desired function.

Since, in Rubin, the user is interested in the *output* of the PLA generator 60, not the program itself, it would make little sense to modify "a function of said placement and wiring processing program stored in said program storage unit during the execution of said placement and wiring processing," as recited in claim 14.

In fact, there's no reason to believe that the PLA generator 60 is even being held in mass storage 604 during execution, let alone being modified there. Since PLA generator 60 rather, is not only capable of examining the database, but also effecting changes to it, it is more likely that it resides outside the database during execution. In particular, as described at column 9, lines 43, 44, and 45:

> Other types of tools such as the user interface 20, the gate-matrix layout 30, the PLA generator 60, and input/output 90 are not only capable of examining the database, but also effecting changes to it.

Since, in Rubin, the PLA generator 60 is not even held in mass storage 604 during execution, there is no description of "modifying a function of said placement and wiring processing program stored in said program storage unit during the execution of said placement and wiring processing," as recited in claim 14. Claim 14 is submitted to be allowable. Withdrawal of the rejection of claim 15 is earnestly solicited.

Claim 15:

The third clause of claim 15 recites:

> Storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed.

Rubin neither teaches, discloses, nor suggests, "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring

processing is executed," as recited in claim 15. Rubin, in fact, mentions storing no execution history at all, let alone, "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

No execution history information is stored in database 615 of Rubin, contrary to the assertion in the fifth bullet in section 6 at page 4 of the final Office Action. In Rubin, rather, the information entered by the *user* is stored in database 615, not the execution history. In particular, as described at column 6, lines 16-22:

> In operation, the user enters information (data and commands) into the keyboard 603 and/or the pointing device 602. In response, the central processor 607 executes instructions according to the programming means 610. Specifically, the information entered is processed by a user interface 611 for storage in a database 615 and for analysis by a plurality of software tools 613.

Since, in Rubin, the information entered by the *user* is stored in database 615, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

Database 615, in Rubin, rather, appears to hold a snapshot of the information entered by the user as it is being kept up to date by database change means 616, not "execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15. In particular, as described at column 6, lines 26-30:

> The database 615 further comprises a database change means 616 for updating the database 615 in response to information from the user interface 611 and a database examination means 617 for allowing examination of the information stored in the database 615.

Since database 615 in Rubin holds a snapshot of the information entered by the user as it is kept up to date by database change means 616, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

Furthermore, in Rubin, a constraint satisfaction means 618 is coupled to the database change means 616 for effecting changes to the information stored in the database 615. In particular, as described at column 6, lines 30-33:

> A constraint satisfaction means 618 is coupled to the database change means 616 for effecting changes to the information stored in the database 615.

Since a constraint satisfaction means 618 effects changes to the information stored in the database 615, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

Furthermore, in Rubin, a plurality of sets of technology information 614 is providing interpretation of the information stored in the database 615. In particular, as described at column 6, lines 33-38:

> Further, a plurality of sets of technology information 614 is selectively connectable to the database 615 for providing interpretation of the information stored in the database 615 in response to information from the user interface 611.

Since technology information 614 is interpreting the information stored in the database 615, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

The information entered by the user that is being held in database 615 of Rubin, rather, appears to be the model being built by the user, not "execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15. In particular, as described at column 4, lines 18, 19, and 20:

> Consistency in the database is achieved through a series of procedures. When a change to a node is requested, that change is made to the database. All rigid arcs connected to the node are then moved and then all nodes connected to those rigid arcs modified.

Since database 615 in Rubin holds model being built by the user, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

Finally, in Rubin, the database 615, which holds the information entered by the user, <u>i.e.</u> the model, is being kept up-to-date, not "execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15. In particular, as described at column 4, lines 39, 40, and 41:

> Each change made to the database originates from one of the analysis or synthesis tools. The change made, and all of the resulting changes, are preserved in a change batch in the database.

Since, in Rubin, the database 615 is being kept up-to-date, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15.

The fourth clause of claim 15 recites:

Checking the placement and wiring processing operated through said placement and wiring processing program based on said execution history information so stored.

Rubin neither teaches, discloses, nor suggests, "checking the placement and wiring processing operated through said placement and wiring processing program based on said execution history information so stored," as recited in claim 15. No placement and wiring processing is being checked based on execution history information, contrary to the assertion in the sixth bullet in section 6 at page 4 of the final Office Action. In Rubin, rather, the information entered by the *user* is stored in database 615, as discussed above, not the execution history, so there is no execution history to check.

Furthermore, Rubin is simply keeping the database 615 up-to-date in response to information from the user interface 611, not "checking the placement and wiring processing operated through said placement and wiring processing program based on said execution history information so stored," as recited in claim 15. In particular, as described at column 6, lines 26-30:

The database 615 further comprises a database change means 616 for updating the database 615 in response to information from the user interface 611 and a database examination means 617 for allowing examination of the information stored in the database 615.

Since, in Rubin, the database 615 is being kept up-to-date, Rubin is not "storing execution history information associated with said placement and wiring processing program every time a series of placement and wiring processing is executed," as recited in claim 15. Claim 15 is submitted to be allowable. Withdrawal of the rejection of claim 15 is earnestly solicited.

Claim 28:

The third clause of claim 28 recites:

Modifying a function of an original of said placement and wiring processing program stored in a program storage unit during the execution of said placement and wiring processing.

Rubin neither teaches, discloses, nor suggests, "modifying a function of an original of said placement and wiring processing program stored in a program storage unit during the execution of said placement and wiring processing," as discussed above with respect to the rejection of

claim 14. Claim 28 is thus believed to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 14. Withdrawal of the rejection of claim 28 is earnestly solicited.

New claim 29:

The second clause of claim 29 recites:

Storing an execution history associated with a program to design a layout of placement and wiring of an integrated circuit as a series of placement and wiring processing is executed.

Rubin neither teaches, discloses, nor suggests, "storing an execution history associated with a program to design a layout of placement and wiring of an integrated circuit as a series of placement and wiring processing is executed," as discussed above with respect to the rejection of claim 15.

The third clause of claim 29 recites:

Error checking the placement and wiring processing operated through said placement and wiring processing program based on said execution history information so stored.

Rubin neither teaches, discloses, nor suggests, "error checking the placement and wiring processing operated through said placement and wiring processing program based on said execution history information so stored," as discussed above with respect to the rejection of claim 15. Claim 29 is thus believed to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 15.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 14, 15, 28, and 29 are allowable over the cited references. Allowance of all claims 14, 15, 28, and 29 and of this entire application is therefore respectfully requested.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.
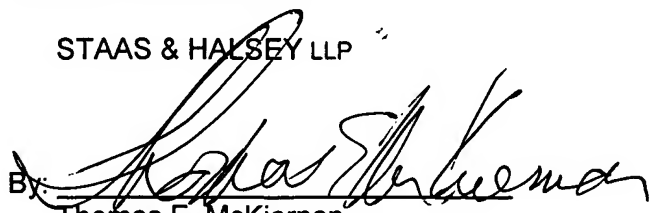
If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 2/16/06

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